

ABSTRACT OF THE DISCLOSURE

A bond log device comprising a sonde, an acoustic transducer, and an acoustic receiver. The acoustic transducer is comprised of a magnet combined with a coil, where the coil is energizable by an electrical current source. The acoustic transducer can also be comprised of an electromagnetic acoustic device. The acoustic transducer is capable of producing various waveforms, including compressional waves, shear waves, transversely polarized shear waves, Rayleigh waves, Lamb waves, and combinations thereof.